SEQUENCE LISTING

<110> MIYAGAWA , Shuji MATSUNAMI , Katsuyoshi <120> HLA-E CHIMERIC MOLECULE <130> 2520-0132PUS1 <140> US 10/578,139 2006-05-03 <141> <160> 92 <170> PatentIn version 3.4 <210> 1 <211> 21 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence SP of HLA-E <400> 1 Met Val Asp Gly Thr Leu Leu Leu Leu Ser Glu Ala Leu Ala Leu 10 5 Thr Gln Thr Trp Ala 20 <210> 2 <211> 90 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence al domain of HLA-E <400> 2 Gly Ser His Ser Leu Lys Tyr Phe His Thr Ser Val Ser Arg Pro Gly 15 10 5 Arg Gly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln 20 25

Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg

35 40 45

Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 50 55 60

Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 65 70 75 80

Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 90

<210> 3

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 3

Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp 1 5 10 15

Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Glu Gln Lys Ser Asn Asp Ala Ser Glu Ala Glu 50 55 60

His Gln Arg Ala Tyr Leu Glu Asp Thr Cys Val Glu Trp Leu His Lys 65 70 75 80

Tyr Leu Glu Lys Gly Lys Glu Thr Leu Leu His Leu 85 90

<210> 4

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric sequence a3 domain of HLA-E <400> 4 Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu 10 Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 25 20 Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu 35 Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 55 50 Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 70 75 His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp 85 <210> 5 <211> 63 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence Transmembrane domain of HLA-E <400> 5 Lys Pro Ala Ser Gln Pro Thr Ile Pro Ile Val Gly Ile Ile Ala Gly 5 10 Leu Val Leu Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val 20 Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys 40

Ala Glu Trp Ser Asp Ser Ala Gln Gly Ser Glu Ser His Ser Leu

55

	6 63 DNA Arti	ficial Sequ	ence				
<220> <223>		ription of f HLA-E	Artificial	Sequence:	Synthetic c	himeric se	quence
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gcg							63
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<220> <223>		cription of domain of HI		Sequence:	Synthetic c	chimeric se	equence
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cgcttca	atct	ctgtgggcta	cgtggacgac	acccagttcg	tgcgcttcga	caacgacgc	2 120
gcgagt	ccga	ggatggtgcc	gcgggcgccg	tggatggagc	aggaggggtc	agagtattg	g 180
gaccgg	gaga	cacggagcgc	cagggacacc	gcacagattt	tccgagtgaa	tctgcggac	g 240
ctgcgc	ggct	actacaatca	gagcgaggcc				270
<210><211><211><212><213>	DNA	ificial Sequ	1ence				
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cgctcc	tgga	ccgcggtgga	cacggcggct	cagatctccg	agcaaaagtc	aaatgatgc	c 180
tctgag	gcgg	agcaccagag	agcctacctg	gaagacacat	gcgtggagtg	gctccacaa	a 240

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7	-7	/_
	- /	r

<400> 11

<210> <211> <212> <213>	9 276 DNA Artificial Sequence	
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence a3 domain of HLA-E	nce
<400>	9	60
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tgctgg	gccc tgggcttcta ccctgcggag atcacactga cctggcagca ggatggggag	120
ggccata	accc aggacacgga gctcgtggag accaggcctg caggggatgg aaccttccag	180
aagtgg	gcag ctgtggtggt gccttctgga gaggagcaga gatacacgtg ccatgtgcag	240
catgage	gggc tacccgagcc cgtcaccctg agatgg	276
<210><211><211><212><213><223>	10 192 DNA Artificial Sequence Description of Artificial Sequence: Synthetic chimeric seque Transmembrane domain of HLA-E	nce
	Transmemorane demark of the second se	
<400> aagccg	10 gett eccageecae catececate gtgggeatea ttgetggeet ggtteteett	60
ggatct	gtgg tetetggage tgtggttget getgtgatat ggaggaagaa gageteaggt	120
ggaaaa	ggag ggagctactc taaggctgag tggagcgaca gtgcccaggg gtctgagtct	180
cacago	ettgt aa	192
<210><211><211><212><213>	PRT	
<220> <223>	Description of Artificial Sequence: Synthetic chimeric seque	ence

Met Val Val Met Ala Pro Arg Thr Leu Phe Leu Leu Ser Gly Ala 10

Leu Thr Leu Thr Glu Thr Trp Ala 20

<210> 12

<211> 90

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric sequence al domain of HLA-G1

<400> 12

Gly Ser His Ser Met Arg Tyr Phe Ser Ala Ala Val Ser Arg Pro Gly 10

Arg Gly Glu Pro Arg Phe Ile Ala Met Gly Tyr Val Asp Asp Thr Gln 30 25

Phe Val Arg Phe Asp Ser Asp Ser Ala Cys Pro Arg Met Glu Pro Arg 40 35

Ala Pro Trp Val Glu Gln Glu Gly Pro Glu Tyr Trp Glu Glu Glu Thr 55 50

Arg Asn Thr Lys Ala His Ala Gln Thr Asp Arg Met Asn Leu Gln Thr 75

Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85

<210> 13

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric sequence a2 domain of HLA-G1

<400> 13

Ser Ser His Thr Leu Gln Trp Met Ile Gly Cys Asp Leu Gly Ser Asp 1 5 10 15

Gly Arg Leu Leu Arg Gly Tyr Glu Gln Tyr Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala Asp Thr 35 40 45

Ala Ala Gln Ile Ser Lys Arg Lys Cys Glu Ala Ala Asn Val Ala Glu 50 55 60

Gln Arg Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu His Arg 65 70 75 80

Tyr Leu Glu Asn Gly Lys Glu Met Leu Gln Arg Ala 85 90

<210> 14

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 14

Asp Pro Pro Lys Thr His Val Thr His His Pro Val Phe Asp Tyr Glu 1 5 10 15

Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Ile 20 25 30

Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Val Glu Leu 35 40 45

Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 50 55 60

Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 65 70 75 80

His Glu Gly Leu Pro Glu Pro Leu Met Leu Arg Trp

<210> <211> <212> <213>	15 40 PRT Artificial Sequence
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence Transmembrane domain of HLA-Gl
<400>	15
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Leu Va	l Val Leu Ala Ala Val Val Thr Gly Ala Ala Val Ala Ala Val 20 25 30
Leu Tr	p Arg Lys Lys Ser Ser Asp 35 40
<210><211><211><212><213>	72
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence SP of HLA-G1
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gagacc	etggg cg
<210> <211> <212> <213>	DNA
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence al domain of HLA-G1
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	catcg ccatgggcta cgtggacgac acgcagttcg tgcggttcga cagcgactcg 120
2	

~~~+~+	1000	aastaasacc	gcgggcgccg	tagatagagc	aggagggcc	agagtattgg	180
							240
gaagagg	jaga	cacggaacac	caaggcccac	gcacagactg	acagaacgaa	cctgcagacc	
ctgcgcg	ggct	actacaacca	gagcgaggcc				270
<210>	18						
<211>	276						
<212> <213>	DNA Art:	ificial Seq	uence				
<220>							
<223>		cription of domain of H	Artificial LA-Gl	Sequence:	Synthetic	chimeric sequ	ence
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cgctcc	tgga	ccgcagcgga	cactgcggct	cagatctcca	agcgcaagtg	tgaggcggcc	180
aatgtg	gctg	aacaaaggag	agcctacctg	gagggcacgt	gcgtggagtg	gctccacaga	240
tacctg	gaga	acgggaagga	gatgctgcag	cgcgcg			276
<210>	19 276	:					
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\ZZ3/	a3	domain of H	HLA-G1	1	_		
<400>	19 cccc	a agacacacgt	z gacccaccac	c cctgtcttt	g actatgaggo	c caccctgagg	60
						g ggatggggag	120
						g aaccttccag	180
						g ccatgtgcag	240
			c cctcatgct				276
<210>		2					
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<220>
      Description of Artificial Sequence: Synthetic chimeric sequence
<223>
      Transmembrane domain of HLA-Gl
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123
tga
<210> 21
<211> 24
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
      Reformed SP
<400> 21
Met Ala Val Met Ala Pro Arg Thr Leu Val Leu Leu Ser Gly Ala
                                 10
Leu Thr Leu Thr Glu Thr Trp Ala
           20
<210> 22
<211> 90
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
      al domain
<400> 22
Gly Ser His Ser Leu Lys Tyr Phe His Thr Ser Val Ser Arg Pro Gly
                                 10
Arg Gly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln
                              25
                                                30
           20
Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg
                                             45
                          40
        35
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Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 60 Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 75 70 Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 <210> 23 <211> 92 <212> PRT <213> Artificial Sequence <220> Description of Artificial Sequence: Synthetic chimeric sequence <223> a2 domain <400> 23 Ser Ser His Thr Leu Gln Trp Met Ile Gly Cys Asp Leu Gly Ser Asp 10 5 Gly Arg Leu Leu Arg Gly Tyr Glu Gln Tyr Ala Tyr Asp Gly Lys Asp 2.5 Tyr Leu Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala Asp Thr 40 Ala Ala Gln Ile Ser Lys Arg Lys Cys Glu Ala Ala Asn Val Ala Glu 50 55 60 Gln Arg Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu His Arg 65 75 Tyr Leu Glu Asn Gly Lys Glu Met Leu Gln Arg Ala 85 <210> 24 <211> 92 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence

a3 domain

<400> 24

Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu 1 5 10 15

Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 20 25 30

Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu 35 40 45

Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 50 55 60

Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 65 70 75 80

His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp 85 90

<210> 25

<211> 63

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric sequence Transmembrane domain

<400> 25

Lys Pro Ala Ser Gln Pro Thr Ile Pro Ile Val Gly Ile Ile Ala Gly 1 5 10 15

Leu Val Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val 20 25 30

Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys 35 40 45

Ala Glu Trp Ser Asp Ser Ala Gln Gly Ser Glu Ser His Ser Leu 50 55 60

<210> 26

<211> 72

<212> <213>	DNA Artificial Sequence	
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gagacc	tggg cg	
<210> <211> <212> <213>	27 270 DNA Artificial Sequence	
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence al domain	ce
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cgcttc	catet etgtgggeta egtggaegae acceagtteg tgegettega caacgaegee	120
gcgagt	cccga ggatggtgcc gcgggcgccg tggatggagc aggaggggtc agagtattgg	180
gaccgg	ggaga cacggagcgc cagggacacc gcacagattt tccgagtgaa tctgcggacg	240
ctgcg	cggct actacaatca gagcgaggcc	270
<210><211><212><212><213>	276 DNA	
<220> <223>	c	ce
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	gtatg aacagtatgc ctacgatggc aaggattacc tcgccctgaa cgaggacctg	120
		180
	ectgga ccgcagcgga cactgcggct cagatctcca agcgcaagtg tgaggcggcc	240
	ggctg aacaaaggag agcctacctg gagggcacgt gcgtggagtg gctccacaga	276
tacct	ggaga acgggaagga gatgctgcag cgcgcg	

<210> <211> <212> <213>	29 276 DNA Artificial Sequence	
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence a3 domain	ž
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ggccata	accc aggacacgga gctcgtggag accaggcctg caggggatgg aaccttccag 18	80
aagtgg	gcag ctgtggtggt gccttctgga gaggagcaga gatacacgtg ccatgtgcag 24	40
catgag	gggc tacccgagcc cgtcaccctg agatgg 2	76
<210> <211> <212> <213> <223>		е
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ggatct	gtgg tetetggage tgtggttget getgtgatat ggaggaagaa gageteaggt 1	20
ggaaaa	aggag ggagctactc taaggctgag tggagcgaca gtgcccaggg gtctgagtct 1	80
cacago	cttgt aa	92
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Leu Thr Leu Thr Glu Thr Trp Ala
           20
<210> 32
<211> 90
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Synthetic chimeric sequence
       al domain
<400> 32
Gly Ser His Ser Leu Lys Tyr Phe His Thr Ser Val Ser Arg Pro Gly
                                   10
                5
Arg Gly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln
                                                    30
                                25
            20
Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg
                          40
Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr
Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr
                                        75
65
Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala
                85
<210> 33
<211> 92
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Synthetic chimeric sequence
       a2 domain
<400> 33
Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp
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Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Lys Arg Lys Cys Glu Ala Ala Asn Val Ala Glu 50 55 60

Gln Arg Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu His Arg 65 70 75 80

Tyr Leu Glu Asn Gly Lys Glu Met Leu Gln Arg Ala 85 90

<210> 34

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric sequence a3 domain

<400> 34

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1 10 15

Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 20 25 30

Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu 35 40 45

Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 50 55 60

Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 65 70 75 80

His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp 85 90

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<210> 35
<211> 63
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<213> Artificial Sequence
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<223> Description of Artificial Sequence: Synthetic chimeric sequence
       Transmembrane domain
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                                    10
                5
Leu Val Leu Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val
                                25
            20
Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys
                            40
        35
Ala Glu Trp Ser Asp Ser Ala Gln Gly Ser Glu Ser His Ser Leu
<210> 36
<211> 72
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
       Reformed SP
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                                                                      60
                                                                      72
gagacctggg cg
<210> 37
 <211> 270
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: Synthetic chimeric sequence
        al domain
 <400> 37
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                                                                       60
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gaccgg	gaga	cacggagcgc	cagggacacc	gcacagattt	tccgagtgaa	tctgcggacg	240
ctgcgc	ggct	actacaatca	gagcgaggcc				270
<210> <211>	38 276						
<212> <213>	DNA Arti	ficial Sequ	ıence				
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				aaggattatc			
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aatgtg	gctg	aacaaaggag	agcctacctg	gagggcacgt	gcgtggagtg	gctccacaga	240
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<220>							
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							180
				accaggcctg			
aagtgg	gcag	ctgtggtggt	gccttctgga	gaggagcaga	gatacacgtg	ccatgtgcag	240
catgag	gggc	tacccgagcc	cgtcaccctg	agatgg			276
<210>	40						
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<220> <223>	Descripti Transmemk	on of orane	Artifi domain	cial	Sequ	ence:	S	ynth€	etic	chi	meri	c se	quence	
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ggaaaag	gag ggag	ctactc	taaggc	tgag	tgga	agcgac	a g	tgcc	cagg	g gt	ctga	gtct	18	0
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<212>	41 24 PRT Artifici	al Seç	quence											
<220> <223>	Descript Reformed		E Artifi	cial	Seq	uence:	S	Synth	etic	ch:	imeri	.c s∈	equence	:
<400>	41													
Met Ala	. Val Met	Ala F 5	Pro Arg	Thr	Leu	Val Le 10	eu I	Leu L	eu S	er	Gly <i>F</i> 15	Ala		
Leu Thi	Leu Thr	Glu :	Thr Trp	Ala										
<210><211><211><212><213>	42 90 PRT Artifici	al Se	quence											
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<400>	42													
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Arg Gl	y Glu Pro 20	o Arg	Phe Ile	Ser	Val 25	Gly T	yr '	Val i	Asp <i>I</i>	Asp 30	Thr	Gln		

Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg

35 40 45

Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 50 55 60

Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 65 70 75 80

Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 90

<210> 43

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 43

Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp 1  $\phantom{000}5\phantom{000}$  10  $\phantom{000}15\phantom{000}$ 

Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Lys Arg Lys Cys Glu Ala Ala Ser Glu Ala Glu 50 55 60

His Gln Arg Ala Tyr Leu Glu Asp Thr Cys Val Glu Trp Leu His Lys 70 75 80

Tyr Leu Glu Lys Gly Lys Glu Thr Leu Leu His Leu 85 90

<210> 44

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric sequence a3 domain <400> 44 Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 25 Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu 35 40 Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 55 50 Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 75 70 His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp 85 <210> 45 <211> 63 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence Transmembrane domain <400> 45 Lys Pro Ala Ser Gln Pro Thr Ile Pro Ile Val Gly Ile Ile Ala Gly 5 15 Leu Val Leu Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val 25 20 Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys 40 Ala Glu Trp Ser Asp Ser Ala Gln Gly Ser Glu Ser His Ser Leu

<210> <211> <212> <213>	46 72 DNA Arti	ficial Sequ	ence				
<220> <223>		ription of rmed SP	Artificial	Sequence:	Synthetic c	himeric sequen	nce
<400> atggcgg	46 gtca	tggcgccccg	aaccctcgtc	ctgctactct	cgggggccct	gaccctgacc	60 72
gagacct	ggg	cg					12
<210><211><211><212><213>	47 270 DNA Arti	ficial Sequ	ience				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic c	chimeric seque	nce
<400> ggctcc	47 cact	ccttgaagta	tttccacact	teegtgteee	ggcccggccg	cggggagccc	60
cgcttc	atct	ctgtgggcta	cgtggacgac	acccagttcg	tgcgcttcga	caacgacgcc	120
gcgagt	ccga	ggatggtgcc	gcgggcgccg	tggatggagc	aggaggggtc	agagtattgg	180
gaccgg	gaga	cacggagcgc	cagggacacc	gcacagattt	tccgagtgaa	tctgcggacg	240
ctgcgc	ggct	actacaatca	gagcgaggcc				270
<210><211><211><212><213>	DNA	ificial Sequ	lence				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic o	chimeric seque	nce
<400> gggtct	48 caca	ccctgcagtg	gatgcatggc	tgcgagctgg	ggcccgacag	gcgcttcctc	60
cgcggg	tatg	aacagttcgc	ctacgacggc	aaggattatc	tcaccctgaa	tgaggacctg	120
cgctcc	tgga:	ccgcggtgga	cactgcggct	cagatctcca	agcgcaagtg	tgaggcggcc	180
tctgag	ıdcdd	agcaccagag	agcctacctg	gaagacacat	gcgtggagtg	gctccacaaa	240

caccegg	jaga aggggaagga gae	5005000			
<210> <211> <212> <213>	49 276 DNA Artificial Sequenc	e			
<220> <223>	Description of Art a3 domain	ificial Sequenc	e: Synthetic o	chimeric sequence	е
<400>	49 ccaa agacacacgt gac	tcaccac cccatct	ctg accatgaggc	caccctgagg	60
	gece tgggetteta ecc				20
					80
	accc aggacacgga gct			J	
aagtgg	gcag ctgtggtggt gcc	ttctgga gaggagc	aga gatacacgtg	ccatgtgcag 2	40
catgag	gggc tacccgagcc cgt	caccctg agatgg		2	76
<210><211><211><212><213><223>	50 192 DNA Artificial Sequence Description of Art Transmembrane doma	ificial Sequenc	e: Synthetic (	chimeric sequenc	е
<400>	50 gett eccageecae cat	coccato atagaca	tca ttactaacct	agtteteett	60
				J 2	20
	gtgg tctctggagc tgt			3 3 3 2 2 2	
ggaaaa	ggag ggagctactc taa	iggctgag tggagcg	aca gtgcccaggg	gtctgagtct 1	8(
cacagc	ttgt aa			1	92
<210><211><211><212><213>		ce			
<220> <223>	Description of Art	ificial Sequenc	e: Synthetic	chimeric sequenc	:e

<400> 51

Met Val Asp Gly Thr Leu Leu Leu Leu Ser Glu Ala Leu Ala Leu 10 Thr Gln Thr Trp Ala 20 <210> 52 <211> 90 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence al domain <400> 52 Gly Ser His Ser Leu Lys Tyr Phe His Thr Ser Val Ser Arg Pro Gly 10 Arg Gly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln 30 25 20 Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg 40 35 Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 55 50 Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 75 70 Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 <210> 53 <211> 92 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence a2 domain

<400> 53

Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp 1 5 10 15

Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Glu Gln Lys Cys Asn Asp Ala Ser Glu Ala Glu 50 55 60

His Gln Arg Ala Tyr Leu Glu Asp Thr Cys Val Glu Trp Leu His Lys 65 70 75 80

Tyr Leu Glu Lys Gly Lys Glu Thr Leu Leu His Leu 85 90

<210> 54

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 54

Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu
1 10 15

Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 20 25 30

Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu 35 40 45

Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 50 55 60

Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 65 70 75 80

His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp

<210 <211 <212 <213	>	55 63 PRT Artif	ficia	al Se	equer	ce											
<220 <223	>	Desci Trans					cial	Sec	quenc	ce:	Synt	heti	.c ch	nimer	ric	seque	ence
<400	>	55															
Lys 1	Pro	Ala	Ser	Gln 5	Pro	Thr	Ile	Pro	Ile 10	Val	Gly	Ile	Ile	Ala 15	Gly		
Leu	Val	Leu	Leu 20	Gly	Ser	Val	Val	Ser 25	Gly	Ala	Val	Val	Ala 30	Ala	Val		
Ile	Trp	Arg 35	Lys	Lys	Ser	Ser	Gly 40	Gly	Lys	Gly	Gly	Ser 45	Tyr	Ser	Lys		
Ala	Glu 50	ı Trp	Ser	Asp	Ser	Ala 55	Gln	Gly	Ser	Glu	Ser 60	His	Ser	Leu			
<210 <211 <212 <213	> >	56 63 DNA Arti	ficia	al Se	equei	nce											
<220 <223		Desc SP o			of A	rtif:	icia	l Sed	quen	ce:	Synt	thet:	ic c	nime	ric	sequ	ence
<400 atgg		56 gatg	gaac	cctc	ct t	ttac [.]	tcct	c tc	ggag	gccc	tgg	ccct [.]	tac	ccaga	acct	gg	60
gcg																	63
<210 <211 <212 <213	.>?	57 270 DNA Arti	fici	al S	eque	nce											
<220 <223			ript		of A	rtif	icia	l Se	quen	ce:	Syn	thet	ic c	hime	ric	sequ	ence

	57 act	ccttgaagta	tttccacact	tccgtgtccc	ggcccggccg	cggggagccc	60
cgcttca	tct	ctgtgggcta	cgtggacgac	acccagttcg	tgcgcttcga	caacgacgcc	120
gcgagtc	cga	ggatggtgcc	gegggegeeg	tggatggagc	aggaggggtc	agagtattgg	180
gaccggg	aga	cacggagcgc	cagggacacc	gcacagattt	tccgagtgaa	tctgcggacg	240
ctgcgcg	gct	actacaatca	gagcgaggcc				270
<211> <212>	58 276 DNA Arti	ficial Sequ	ience				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic o	chimeric seque	nce
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cgcgggt	atg	aacagttcgc	ctacgacggc	aaggattatc	tcaccctgaa	tgaggacctg	120
cgctcct	gga	ccgcggtgga	cacggcggct	cagatctccg	agcaaaagtg	taatgatgcc	180
tctgagg	gcgg	agcaccagag	agcctacctg	gaagacacat	gcgtggagtg	gctccacaaa	240
tacctgg	gaga	aggggaagga	gacgctgctt	cacctg			276
<210> <211> <212> <213>	59 276 DNA Arti	ificial Seq	uence				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic	chimeric seque	ence
<400>	59	agagagat	aactcaccac	cccatctctq	accatgaggc	caccctgagg	60
					cctggcagca		120
					caggggatgg		180
					gatacacgtg		240
			cgtcaccctg		J . J-9	2 3 2	276
cargage	yyyc	caccegagee	cyclacicity	agacgg			

<210> 60

<211> <212> <213>	192 DNA Artificial Sequence	
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence Transmembrane domain	
<400> aagccgg	60 gett cecageceae catececate gtgggeatea ttgetggeet ggtteteett 6	0
ggatct	gtgg tctctggagc tgtggttgct gctgtgatat ggaggaagaa gagctcaggt 12	0
ggaaaa	ggag ggagctactc taaggctgag tggagcgaca gtgcccaggg gtctgagtct 18	0
cacagc	ttgt aa 19	2
<210><211><211><212><213>		
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence Reformed SP	
<400>	61	
Met Al 1	a Val Met Ala Pro Arg Thr Leu Val Leu Leu Leu Ser Gly Ala 5 10 15	
Leu Th	nr Leu Thr Glu Thr Trp Ala 20	
<210><211><211><212><213>	90 PRT	
<220> <223>	Description of Artificial Sequence: Synthetic chimeric sequence al domain	)
<400>	62	
Gly Se	er His Ser Leu Lys Tyr Phe His Thr Ser Val Ser Arg Pro Gly 5 10 15	
Arg Gl	ly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln 20 25 30	

Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg 35 40 45

Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 50 55 60

Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 65 70 75 80

Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 90

<210> 63

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 63

Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Glu Gln Lys Cys Asn Asp Ala Ser Glu Ala Glu 50 55 60

His Gln Arg Ala Tyr Leu Glu Asp Thr Cys Val Glu Trp Leu His Lys 65 70 75 80

Tyr Leu Glu Lys Gly Lys Glu Thr Leu Leu His Leu 85 90

<210> 64

<211> 92

<212> PRT

<213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence a3 domain <400> 64 Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu 10 Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 25 Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 55 50 Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 70 75 His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp 85 <210> 65 <211> 63 <212> PRT <213> Artificial Sequence <220> Description of Artificial Sequence: Synthetic chimeric sequence <223> Transmembrane domain <400> 65 Lys Pro Ala Ser Gln Pro Thr Ile Pro Ile Val Gly Ile Ile Ala Gly Leu Val Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val 25 20 Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys

40

Ala Glu 50	ı Trp Ser Asp Se	er Ala Gln G 55	Gly Ser Glu	Ser His Ser 60	. Leu	
<210><211><212><212><213>	66 72 DNA Artificial Sequ	ience				
<220> <223>	Description of Reformed SP	Artificial	Sequence:	Synthetic o	chimeric se	quence
<400> atggcgg	66 gtca tggcgccccg	aaccctcgtc	ctgctactct	cgggggccct	gaccctgacc	60
gagacct	eggg eg					72
<210><211><212><212><213>	67 270 DNA Artificial Sequ	ıence				
<220> <223>	Description of al domain	Artificial	Sequence:	Synthetic o	chimeric se	quence
<400> ggctccc	67 cact cottgaagta	tttccacact	tccgtgtccc	ggcccggccg	cggggagccc	60
cgcttca	atct ctgtgggcta	cgtggacgac	acccagttcg	tgcgcttcga	caacgacgcc	120
gcgagt	ccga ggatggtgcc	gegggegeeg	tggatggagc	aggaggggtc	agagtattgg	180
gaccgg	gaga cacggagcgc	cagggacacc	gcacagattt	tccgagtgaa	tctgcggacg	240
ctgcgc	ggct actacaatca	gagcgaggcc				270
<210> <211> <212> <213>	68 276 DNA Artificial Sequ	ıence				
<220> <223>	Description of a2 domain	Artificial	Sequence:	Synthetic o	chimeric se	quence
<400>	68 caca ccctgcagtg	gatgcatggc	tgcgagctgg	ggcccgacag	gegetteete	60
	tato aacaottooc					

cgctcct	gga	ccgcggtgga	cacggcggct	cagatctccg	agcaaaagtg	taatgatgo	cc 180
tctgagg	gegg	agcaccagag	agcctacctg	gaagacacat	gcgtggagtg	gctccacaa	aa 240
tacctg	gaga	aggggaagga	gacgctgctt	cacctg			276
<210> <211> <212> <213>	69 276 DNA Arti	ificial Sequ	ience				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic o	chimeric s	sequence
<400> gagccc	69 ccaa	agacacacgt	gactcaccac	cccatctctg	accatgaggc	caccctgag	gg 60
tgctgg	gada	tgggcttcta	ccctgcggag	atcacactga	cctggcagca	ggatgggga	ag 120
ggccata	accc	aggacacgga	gctcgtggag	accaggcctg	caggggatgg	aaccttcca	ag 180
aagtgg	gcag	ctgtggtggt	gccttctgga	gaggagcaga	gatacacgtg	ccatgtgca	ag 240
catgag	gggc	tacccgagcc	cgtcaccctg	agatgg			276
<210><211><211><212><213>	70 192 DNA Art:	ificial Sequ	lence				
<220> <223>		cription of nsmembrane o		Sequence:	Synthetic	chimeric :	sequence
<400> aagccg		cccagcccac	catececate	gtgggcatca	ttgctggcct	ggttctcc	ct 60
ggatct	gtgg	tctctggagc	tgtggttgct	gctgtgatat	ggaggaagaa	gageteage	gt 120
ggaaaa	ggag	ggagctactc	taaggctgag	tggagcgaca	gtgcccaggg	gtctgagt	et 180
cacage	ttgt	aa					192
<210><211><211><212><212><213>	71 21 PRT Art:	ificial Seq	ıence				
<220> <223>		cription of of HLA-E	Artificial	Sequence:	Synthetic	chimeric :	sequence

<400> 71 Met Val Asp Gly Thr Leu Leu Leu Leu Ser Glu Ala Leu Ala Leu 5 10 Thr Gln Thr Trp Ala 20 <210> 72 <211> 90 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic chimeric sequence al domain <400> 72 Gly Ser His Ser Leu Lys Tyr Phe His Thr Ala Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg 40 Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 50 55 60 Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 65 70 75 Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 <210> 73 <211> 92

<223> Description of Artificial Sequence: Synthetic chimeric sequence

<212> PRT

<220>

<213> Artificial Sequence

a2 domain

<400> 73

Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp 1 5 10 15

Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Glu Gln Lys Cys Asn Asp Ala Ser Glu Ala Glu 50 55 60

His Gln Arg Ala Tyr Leu Glu Asp Thr Cys Val Glu Trp Leu His Lys 65 70 75 80

Tyr Leu Glu Lys Gly Lys Glu Thr Leu Leu His Leu 85 90

<210> 74

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 74

Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu
1 5 10 15

Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr 20 25 30

Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu 35 40 45

Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala 50 55 60

Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln 65 70 75 80

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His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp
               85
<210> 75
<211> 63
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
       Transmembrane domain
<400> 75
Lys Pro Ala Ser Gln Pro Thr Ile Pro Ile Val Gly Ile Ile Ala Gly
                                                       15
                5
                                   10
Leu Val Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val
                                25
            20
Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys
Ala Glu Trp Ser Asp Ser Ala Gln Gly Ser Glu Ser His Ser Leu
                        55
<210> 76
<211> 63
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
       SP of HLA-E
<400> 76
atggtagatg gaaccctcct tttactcctc tcggaggccc tggcccttac ccagacctgg
                                                                      60
                                                                      63
gcg
<210> 77
<211> 270
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
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## al domain

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cgcttc	atct	ctgtgggcta	cgtggacgac	acccagttcg	tgcgcttcga	caacgacgcc	120
gcgagt	ccga	ggatggtgcc	gcgggcgccg	tggatggagc	aggaggggtc	agagtattgg	180
gaccgg	gaga	cacggagcgc	cagggacacc	gcacagattt	tccgagtgaa	tctgcggacg	240
ctgcgc	ggct	actacaatca	gagcgaggcc				270
<210> <211> <212> <213>	78 276 DNA Art:	ificial Seq	uence				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic o	chimeric seque	nce
<400>	78 caca	ccctqcaqtq	gatgcatggc	tgcgagctgg	ggcccgacag	gcgcttcctc	60
				aaggattatc			120
				cagateteeg			180
							240
				gaagacacat	gcgcggagcg	gctccacaaa	
Laccigo	jaga	aggggaagga	gacgctgctt	cacctg			276
<210> <211> <212> <213>	79 276 DNA Arti	ficial Sequ	ience				
<220> <223>		cription of domain	Artificial	Sequence:	Synthetic o	chimeric seque	nce
<400>	79						60
				cccatctctg			60
tgctggg	gccc	tgggcttcta	ccctgcggag	atcacactga	cctggcagca	ggatggggag	120
ggccata	accc	aggacacgga	gctcgtggag	accaggcctg	caggggatgg	aaccttccag	180
aagtggg	gcag	ctgtggtggt	gccttctgga	gaggagcaga	gatacacgtg	ccatgtgcag	240
catgago	gggc	tacccgagcc	cgtcaccctg	agatgg			276

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<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
       Transmembrane domain
<400> 80
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                                                                     60
ggatctgtgg tctctggagc tgtggttgct gctgtgatat ggaggaagaa gagctcaggt
                                                                    120
qqaaaaqqaq qqaqctactc taagqctgag tggagcgaca gtgcccaggg gtctgagtct
                                                                    180
cacagcttgt aa
                                                                    192
<210> 81
<211> 24
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
      Reformed SP
<400> 81
Met Ala Val Met Ala Pro Arg Thr Leu Val Leu Leu Ser Gly Ala
                                   10
Leu Thr Leu Thr Glu Thr Trp Ala
            20
<210> 82
<211> 90
<212> PRT
<213> Artificial Sequence
<220>
      Description of Artificial Sequence: Synthetic chimeric sequence
<223>
      al domain
<400> 82
Gly Ser His Ser Leu Lys Tyr Phe His Thr Ala Val Ser Arg Pro Gly
                                   10
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<210> 80 <211> 192 Arg Gly Glu Pro Arg Phe Ile Ser Val Gly Tyr Val Asp Asp Thr Gln 20 25 30

Phe Val Arg Phe Asp Asn Asp Ala Ala Ser Pro Arg Met Val Pro Arg 35 40 45

Ala Pro Trp Met Glu Gln Glu Gly Ser Glu Tyr Trp Asp Arg Glu Thr 50 60

Arg Ser Ala Arg Asp Thr Ala Gln Ile Phe Arg Val Asn Leu Arg Thr 65 70 75 80

Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala 85 90

<210> 83

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<400> 83

Gly Ser His Thr Leu Gln Trp Met His Gly Cys Glu Leu Gly Pro Asp  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Arg Arg Phe Leu Arg Gly Tyr Glu Gln Phe Ala Tyr Asp Gly Lys Asp 20 25 30

Tyr Leu Thr Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Val Asp Thr 35 40 45

Ala Ala Gln Ile Ser Glu Gln Lys Cys Asn Asp Ala Ser Glu Ala Glu 50 55 60

His Gln Arg Ala Tyr Leu Glu Asp Thr Cys Val Glu Trp Leu His Lys 65 70 75 80

Tyr Leu Glu Lys Gly Lys Glu Thr Leu Leu His Leu 85 90

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<210> 84
<211> 92
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic chimeric sequence
      a3 domain
<400> 84
Glu Pro Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu
                                   10
Ala Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr
                               25
Leu Thr Trp Gln Gln Asp Gly Glu Gly His Thr Gln Asp Thr Glu Leu
        35
                           40
Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala
                       55
    50
Val Val Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln
                                       75
                    70
His Glu Gly Leu Pro Glu Pro Val Thr Leu Arg Trp
               85
<210> 85
<211> 63
<212> PRT
<213> Artificial Sequence
<220>
<223>
      Description of Artificial Sequence: Synthetic chimeric sequence
       Transmembrane domain
<400> 85
Lys Pro Ala Ser Gln Pro Thr Ile Pro Ile Val Gly Ile Ile Ala Gly
                5
Leu Val Leu Gly Ser Val Val Ser Gly Ala Val Val Ala Ala Val
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Ile Trp Arg Lys Lys Ser Ser Gly Gly Lys Gly Gly Ser Tyr Ser Lys

	Glu 50	Trp	Ser	Asp	Ser	Ala 55	Gln (	Gly Se	er Glu	Ser H 60	is Se	c Leu		
<2103 <2113 <2123 <2133	>	86 72 DNA Arti	ficia	al Se	que	nce								
<220: <223:			ripti		of A	rtif	icial	Seque	ence:	Synth	etic (	chimeri	.c se	quence
	cgg	ıtca		gecec	g a	accct	cgtc	ctgct	actct	cgggg	ıgccct	gaccct	gacc	60 72
gaga	cct	ggg	cg											12
<210 <211 <212 <213	>	87 270 DNA Arti	ficia	al Se	eque	nce								
<220 <223			cript: domain		of A	rtif	icial	Seque	ence:	Synth	netic	chimeri	ic se	quence
<400														
ggct	CCC	cact	cctt	gaagt	a t	ttcc	acact	gccgt	gtccc	ggccc	eggeeg	cgggga	agccc	60
cgct	tca	atct	ctgt	gggct	a c	gtgg	acgac	accca	agttcg	tgcgc	cttcga	caacga	acgcc	120
gcga	gto	ccga	ggat	ggtgo	cc g	cggg	cgccg	tgga	ggagc	aggag	gggtc	agagta	attgg	180
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